

# AMENDED CLAIMS

[Received by the International Bureau on 01 February 2005 (01.02.2005);  
original claims 1, 3, 4, 5, 6, 9 and 10 amended,  
original claims 2, 7 and 8 unchanged (5 pages)]

## + Statement

1. A method of making a water-based lubricant composition comprising the steps of

providing water

providing a phthalate ester having at least one terminal hydroxyl group, wherein the phthalate ester is a reaction product that has been formed by

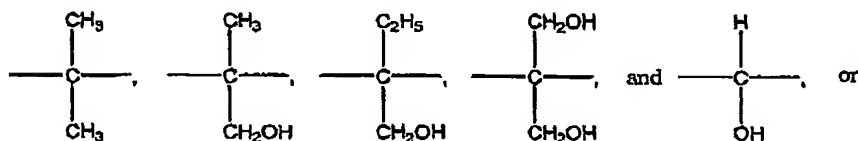
a. reacting phthalic anhydride with at least one alcohol, wherein the alcohol is either

(1) a fatty alcohol having the formula ROH, where R is C<sub>4</sub> to C<sub>22</sub> branched or linear; or

(2) a polyol having the formula HO-R<sub>1</sub>-OH, wherein R<sub>1</sub> represents:

(a) alkylene groups of 2 to 10 carbon atoms;

(b) -CH<sub>2</sub>-R<sub>2</sub>-CH<sub>2</sub>- wherein R<sub>2</sub> represents:



(c) -(R<sub>3</sub>O)<sub>n</sub>-R<sub>3</sub>-

where each R<sub>3</sub> independently is an alkylene group of 2 to 4 carbon atoms, and n is an integer of from 1 - 200; and

b. reacting the product resulting from the phthalic anhydride alcohol reaction with an alkoxyating agent to produce the phthalate ester reaction product having at least one terminal hydroxyl group; and

mixing the phthalate ester and water.

2. The method of claim 1 further comprising the steps of:

providing at least one other desirable ingredient; and

mixing the phthalate ester, water and at least one other desirable ingredient.

3. The method of claim 1 wherein the phthalate ester is provided in an amount of 2% to 20% based on the weight of the final composition; and

the water is provided in an amount of 60% to 93% based on the weight of the final composition.

4. The method of claim 2 wherein:

the phthalate ester is provided in an amount of 2% to 20% based on the weight of the final composition;

the water is provided in an amount of 60% to 93% based on the weight of the final composition; and

the at least one other desirable ingredient is provided in a total amount of 2% to 20% based on the weight of the final composition.

5. A water-based lubricant composition comprising:

water in an amount of 60% to 93% based on the weight of the final composition;  
and

phthalate ester in an amount of 2% to 20% based on the weight of the final composition, wherein the phthalate ester has at least one terminal hydroxyl group and is a reaction product that has been formed by

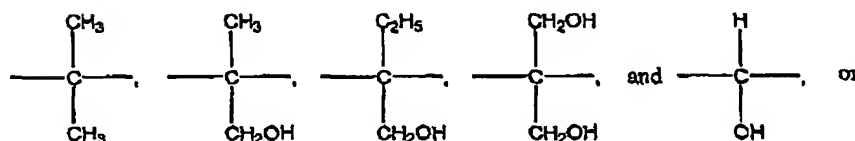
a. reacting phthalic anhydride with at least one alcohol, wherein the alcohol is either:

(1) a fatty alcohol having the formula ROH, where R is C<sub>4</sub> to C<sub>22</sub> branched or linear; or

(2) a polyol having the formula HO-R<sub>1</sub>-OH, wherein R<sub>1</sub> represents:

(a) alkylene groups of 2 to 10 carbon atoms;

(b) -CH<sub>2</sub>-R<sub>2</sub>-CH<sub>2</sub>- wherein R<sub>2</sub> represents:



(c) -(R<sub>3</sub>O)<sub>n</sub>-R<sub>3</sub>-

where each R<sub>3</sub> independently is an alkylene group of 2 to 4 carbon atoms, and n is an integer of from 1 - 200; and

b. reacting the product resulting from the phthalic anhydride alcohol reaction with an alkoxyating agent to produce the phthalate ester reaction product having at least one terminal hydroxyl group.

6. The water-based lubricant of claim 5 further comprising:

at least one other desirable ingredient in a total amount of 2% to 20% based on the weight of the final composition.

7. The water-based lubricant of claim 6 wherein the phthalate ester comprises 5% by weight of the final composition; water comprises 90% by weight of the final composition; and the at least one other desirable ingredient comprises a total of 5% of the final composition.

8. The water-based lubricant of claim 5 wherein the at least one other desirable ingredient is triethanolamine.

9. A method of metalworking comprising the step of:

utilizing a water-based lubricant composition comprising:

water in an amount of 60% to 93% based on the weight of the final composition;

a phthalate ester in an amount of 2% to 20% based on the weight of the final composition wherein the phthalate ester has at least one terminal hydroxyl group and is a reaction product that has been formed by

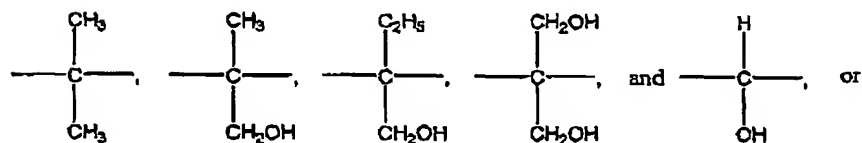
a. reacting phthalic anhydride with at least one alcohol, wherein the alcohol is either:

(1) a fatty alcohol having the formula ROH, where R is C<sub>4</sub> to C<sub>22</sub> branched or linear; or

(2) a polyol having the formula HO-R<sub>1</sub>-OH, wherein R<sub>1</sub> represents:

(a) alkylene groups of 2 to 10 carbon atoms;

(b) -CH<sub>2</sub>-R<sub>2</sub>-CH<sub>2</sub>- wherein R<sub>2</sub> represents:



(c) -(R<sub>3</sub>O)<sub>n</sub>-R<sub>3</sub>-

where each R<sub>3</sub> independently is an alkylene group of 2 to 4 carbon atoms, and n is an integer of from 1 - 200; and

b. reacting the product resulting from the phthalic anhydride alcohol reaction with an alkoxyating agent to produce the phthalate ester reaction product having at least one terminal hydroxyl group.

10. The method of claim 9 wherein, the water-based lubricant further comprises at least one other desirable ingredient in a total amount of 2% to 20% based on the weight of the final composition.

**STATEMENT PURSUANT TO ARTICLE 19(1)/Rule 46**

The International Bureau of the WIPO  
34, Chemin des Colombettes  
1211 Geneva 20, Switzerland

Dear Sirs:

The Applicant for the above-identified international application respectfully requests entry of the amendments described herein and embodied in the attached substitute sheets, pursuant to PCT Article 19 and Rule 46.

The amendment requested is the substitution of application pages 8-12 filed herewith for application pages 9-10, as originally filed. The substitution pages contain amended claims 1, 3, 4, 5, 6, 9 and 10, and original claims 2, 7 and 8. This letter and amendment are being transmitted by facsimile.

This amendment is being timely filed within 2 months from the date of transmittal of the International Search Report, which was mailed on December 1, 2004.

The amended claims all find support throughout the application as originally filed. Thus, the amendments do not go beyond the disclosure of the application as filed. Support for the amendments to claims 1, 5 and 9 may be found, for example, at pp. 2-3 of the amended application specification filed on July 13, 2004. The amendments made to claims 3, 4, 6 and 10 are for purposes of clarity.

The amendments to the claims are as follows: